



IN THE UNITED STATES  
PATENT AND TRADEMARK OFFICE

PATENT APPLICATION

Dan Anthony Balogh  
John K Burgess  
T Roger Kiang  
Stanley Vitebsky

CASE 4-4-4-18

Serial No. 09/728043 Group Art Unit 2617

Filed December 1, 2000

Examiner N. Ly

Title Supplemental Channel Sharing Algorithm

ASSISTANT COMMISSIONER FOR PATENTS  
WASHINGTON, D.C. 20231

SIR:

Enclosed is an appeal brief in triplicate for the above-identified application.

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Respectfully,

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Date:

Feb. 5, 2007

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Margaret Cardoso



PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:

Dan A. Balogh

John K. Burgess

Roger T. Kiang

Stan Vitebsky

Examiner: Nghi H. Ly

Group Art Unit: 2617

Serial No.: 09/728,043

Att'y Docket: 4-4-4-18

Filed: December 1, 2000

For: Supplemental Channel Sharing Algorithm

**APPEAL BRIEF**

A-1

02/08/2007 SSSES1 00000024 122325 09728043  
02 FC:1402 500.00 DA

Serial No. 09/728,043  
Appeal Brief

Commissioner of Patents

Arlington, VA

Sir:

Applicants hereby submit an original and two copies of this Appeal Brief to the Board of Patent Appeals and Interferences in response to the office action dated June 6, 2006 and advisory action dated October 30, 2006. A Notice of Appeal was filed on November 3, 2006 with the necessary extensions of time, so this Appeal Brief is believed to be timely filed.

The Assistant Commissioner is authorized to deduct the fee for filing this Appeal Brief (\$500) from Lucent Technologies Deposit Account No. 12-2325.

CERTIFICATE OF MAILING

37 C.F.R. 1.8

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2/5/2007

Date

Margaret Cardoso

Signature

Serial No. 09/728,043  
Appeal Brief

## **BRIEF ON BEHALF OF APPELLANTS**

In support of the Notice of Appeal filed on November 3, 2006, Appellants hereby provide the following remarks.

### **I. REAL PARTY IN INTEREST**

The present application is owned by Lucent Technologies, Inc. The assignment of the present application to Lucent Technologies, Inc., is recorded at Reel 011336, Frame 0093.

### **II. RELATED APPEALS AND INTERFERENCES**

Applicant is not aware of any related appeals and/or interferences that might affect the outcome of this proceeding.

### **III. STATUS OF THE CLAIMS**

Claims 1-10 are pending in the application. The claims as currently pending are attached as Appendix A.

Claims 1-9 were rejected under 35 U.S.C. §103(a) as being unpatentable over Barnes et al (US 5,613,196) in view of Sonetaka (US 6,591,107). Claim 10 was rejected under 35 U.S.C. §103(a) as being unpatentable over Barnes in view of Sonetaka and in further view of Vanderspoo, II et al (US 5,261,118).

### **IV. STATUS OF AMENDMENTS**

There has been no amendment to the claims after final rejection..

### **V. SUMMARY OF CLAIMED SUBJECT MATTER**

The present invention is a method for utilizing SCH resources more efficiently for supplemental channels (SCH) by minimizing gaps between data bursts due to overhead delays. Such gaps are minimized using a supplemental channel sharing algorithm to prospectively assign

SCH resources supporting existing SCHs and to schedule future issuance of data notified requests (DNR) such that currently unavailable SCH resources may be prospectively assigned based on states of the SCH resources, wherein an existing SCH is a SCH over which a data burst is currently being transmitted and a DNR is a request for SCH resources. That is, the present invention allows resources which are not currently available, e.g., resources currently being used to support a supplemental channel for another user, to now be scheduled to support some supplemental channel in the future for a different or same user.

In one embodiment, the present invention is a method of sharing supplemental channel resources comprising the steps of receiving a data notify request, and prospectively assigning currently unavailable supplemental channel resources to support a future supplemental channel for a user associated with the received data notify request if the data notified request was received during an open assignment state, wherein a future SCH is a SCH supported by SCH resources which are either currently unavailable or has been prospectively assigned.

By allowing resources to be scheduled to support some future channel while such resources are currently unavailable, gaps between data bursts associated with overhead delays are minimized resulting in a more efficient use of the resources.

## **VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL**

Appellant respectfully requests that the Board review and overturn the two rejections present in this case. The following issues are presented on appeal in this case:

(A) Whether claims 1-9 are unpatentable over Barnes et al (US 5,613,196) in view of Sonetaka (US 6,591,107).

(C) Whether claim 10 is unpatentable over Barnes et al (US 5,613,196) in view of Sonetaka (US 6,591,107) and in further view of Vanderspoo, II et al (US 5,261,118).

## VII. ARGUMENT

### A. Legal Standards

As the Examiner well knows, to establish a *prima facie* case of obviousness, three basic criteria must be met. First, the prior art reference (or references when combined) must teach or suggest all the claim limitations. *In re Royka*, 490 F.2d 981, 180 U.S.P.Q. 580 (CCPA 1974). Second, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. That is, there must be something in the prior art as a whole to suggest the desirability, and thus the obviousness, of making the combination. *Panduit Corp. v. Dennison Mfg. Co.*, 810 F.2d 1561 (Fed. Cir. 1986). In fact, the absence of a suggestion to combine is dispositive in an obviousness determination. *Gambro Lundia AB v. Baxter Healthcare Corp.*, 110 F.3d 1573 (Fed. Cir. 1997). The mere fact that the prior art can be combined or modified does not make the resultant combination obvious unless the prior art also suggests the desirability of the combination. *In re Mills*, 916 F.2d 680, 16 U.S.P.Q.2d 1430 (Fed. Cir. 1990); M.P.E.P. § 2143.01. Third, there must be a reasonable expectation of success.

The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on applicant's disclosure. *In re Vaeck*, 947 F.2d 488, 20 U.S.P.Q.2d 1438 (Fed. Cir. 1991); M.P.E.P. § 2142. A recent Federal Circuit case emphasizes that, in an obviousness situation, the prior art must disclose each and every element of the claimed invention, and that any motivation to combine or modify the prior art must be based upon a suggestion in the prior art. *In re Lee*, 61 U.S.P.Q.2d 143 (Fed. Cir. 2002). Conclusory statements regarding common knowledge and common sense are insufficient to support a finding of obviousness. *Id.* at 1434-35. Moreover, it is the claimed invention, as a whole, that must be considered for purposes of determining obviousness. A mere selection of various bits and pieces of the claimed invention from various sources of prior art does not render a claimed invention obvious, unless there is a suggestion or motivation in the prior art for the claimed invention, when considered as a whole.

It is by now well established that teaching away by the prior art constitutes *prima facie* evidence that the claimed invention is not obvious. *See, inter alia, In re Fine*, 5 U.S.P.Q.2d

(BNA) 1596, 1599 (Fed. Cir. 1988); *In re Nielson*, 2 U.S.P.Q.2d (BNA) 1525, 1528 (Fed. Cir. 1987); *In re Hedges*, 228 U.S.P.Q. (BNA) 685, 687 (Fed. Cir. 1986).

**B. Claims 1-9 are patentable over Barnes et al in view of Sonetaka**

Claim 1-9 were rejected under 35 U.S.C. §103(a) as being unpatentable over Barnes et al (US 5,613,196) in view of Sonetaka (US 6,591,107). Applicants respectfully disagree. Claim 1 recites the limitation of “prospectively assigning currently unavailable supplemental channel resources.” The term “currently unavailable supplemental channel resources” is defined in the specification, for example, at page 6 lines 21-22 to be supplemental channel (SCH) resources supporting existing supplemental channels. The term “existing supplemental channel” is further defined in the specification, for example, at page 7 line 1 to be a supplemental channel over which a data burst is currently being transmitted.

As stated earlier, to establish a *prima facie* of obviousness, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The office action alleges that Sonetaka teaches “prospectively assigning currently unavailable channel resources.” Col. 4, lines 62-65 and col. 7, line 65 to col. 8, line 2 were cited in support thereof. Applicants respectfully submit that Sonetaka does not teach prospectively assigning SCH resources supporting existing SCHs, i.e., currently unavailable supplemental channel resources. Sonetaka teaches dividing a set of seven channels into reserved and unreserved channels. Specifically, two of the seven channels are reserved (i.e., reserved channels) in advance and can only be used by service A subscribers. The remaining five channels are not reserved (i.e., unreserved channels) for service A subscribers only, and may be used by service A and B subscribers. Thus, service B subscribers can only use the unreserved channels. See Fig. 4 and col. 4, line 61 to col. 5, line 5. Assignment of the unreserved and reserved channels is based on service level of the subscriber and availability of the channels. All of the unreserved channels will be assigned before any of the reserved channels are assigned. If all of the unreserved channels are assigned (i.e., no unreserved channel is free), then free reserved channels may be assigned to service A subscribers (but not to service B subscribers). See Figs 5-6 and col. 5, lines 6-38 (lines 32-34 in particular).

There is no teaching or suggestion in Sonetaka to assign a reserved (or unreserved) channel to service A (or B) subscribers when a data burst is currently being transmitted over that

specific reserved (or unreserved) channel. That is, Sonetaka does not teach nor suggest assigning a reserved or unreserved channel when such channel is not free, i.e., currently being used for data transmission. By contrast, as mentioned earlier, claim 1 recites the limitation of “prospectively assigning currently unavailable supplemental channel resources,” i.e., resources are assigned when such resources are supporting a supplemental channel over which a data burst is currently being transmitted.

Claims 2-9 depend upon, and include all the limitations of, claim 1. Thus, claims 2-9 also include the limitation of “prospectively assigning currently unavailable supplemental channel resources.”

For the aforementioned reasons, Sonetaka does not disclose nor suggest the limitation of “prospectively assigning currently unavailable supplemental channel resources.” Nor is it felt that Barnes discloses or suggests the limitation of “prospectively assigning currently unavailable supplemental channel resources.” Thus, Applicants respectfully submit that the prior art of record does not teach all limitations of the invention set forth in claims 1-9 and requests that the Examiner’s rejections of claims 1-9 be REVERSED.

**C. Claim 10 is patentable over over Barnes et al in view of Sonetaka in further view of Vanderspoo, II et al**

Claim 10 was rejected under 35 U.S.C. §103(a) as being unpatentable over Barnes in view of Sonetaka and in further view of Vanderspoo, II et al (US 5,261,118). Claim 10 depends upon, and includes all the limitations of, claim 1. As discussed above, Sonetaka does not disclose nor suggest the limitation of “prospectively assigning currently unavailable supplemental channel resources.” Nor is it felt that neither Barnes nor Vanderspoo disclose or suggest the limitation of “prospectively assigning currently unavailable supplemental channel resources.” Thus, Applicants respectfully submit that the prior art of record does not teach all limitations of the invention set forth in claim 10 and requests that the Examiner’s rejections of claim 10 be REVERSED.



Respectfully submitted,

Date: February 5, 2007

A handwritten signature in black ink, appearing to read "M. I. Finston", is written over a horizontal line.

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## VIII. CLAIMS APPENDIX

1. (previously presented) A method of sharing supplemental channel resources in a system utilizing open assignment and open waiting states for responding to a resource request, the method comprising the steps of:
  - receiving a data notify request indicating a request for supplemental channel resources; and
  - prospectively assigning currently unavailable supplemental channel resources to support a future supplemental channel for a user associated with the received data notify request if the data notify request was received during an open assignment state during which the currently unavailable supplemental channel resources are available for prospective assignment.
2. (previously presented) The method of claim 1 comprising the additional step of:
  - determining whether other supplemental channel resources are available if the data notify request was not received during the open assignment state.
3. (previously presented) The method of claim 2 comprising the additional step of:
  - assigning the other supplemental channel resources to the user if the other supplemental channel resources are available.
4. (previously presented) The method of claim 3, wherein the step of assigning the other supplemental channel resources comprises the step of:
  - scheduling a next data notify request to be issued for the user in a next preferred user assignment window associated with the other supplemental channel resources, the preferred user assignment window corresponding to a time period during which a current user may be scheduled to issue a data notify request.
5. (previously presented) The method of claim 2 comprising the additional step of:

determining whether the currently unavailable supplemental channel resources are in an open waiting state during which the currently unavailable supplemental channel resources are not available for prospective assignment.

6. (previously presented) The method of claim 5 comprising the additional step of:  
scheduling a next data notify request for the user in a next waiting user assignment window associated with the currently unavailable supplemental channel resources if the currently unavailable supplemental channel resources are in the open waiting state, the waiting user assignment window corresponding to a time period during which a waiting user may be scheduled to issue a data notify request.
7. (previously presented) The method of claim 5 comprising the additional step of:  
scheduling a next data notify request for the user to be issued if the currently unavailable supplemental channel resources are not in the open waiting state.
8. (previously presented) The method of claim 1, wherein the step of prospectively assigning the currently unavailable supplemental channel resources comprises the step of:  
determining whether the user is a current user of supplemental channel resources.
9. (previously presented) The method of claim 8, wherein the step of prospectively assigning the currently unavailable supplemental channel resources comprises the additional steps of:  
reducing a continuation count for the user if the user is a current user; and  
scheduling when to issue a next data notify request for the user based on the continuation count.
10. (previously presented) The method of claim 8, wherein the step of prospectively assigning the currently unavailable supplemental channel resources comprises the additional step of:

determining if a first data rate is different from a second data rate, the first data rate being associated with the currently unavailable supplemental channel resources, the second data rate being associated with the future supplemental channel.

## **IX. EVIDENCE APPENDIX**

Applicant is not aware of any evidence submitted pursuant to §§ 1.130, 1.131 or 1.132, that might affect the outcome of this proceeding. Evidence entered by Examiner and relied upon by appellant in the appeal are as follows: U.S. Patent No. 5,613,196 (Barnes), U.S. Patent No. 6,591,107 (Sonetaka) and U.S. Patent No. 5,261,118 (Vanderspool).

## **IX. RELATED PROCEEDINGS APPENDIX**

Applicant is not aware of any related appeals and/or interferences that might affect the outcome of this proceeding.